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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,968	11/14/2001	Gernot Wirmsberger	1279-338	3477

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EXAMINER

LEUNG, QUYEN PHAN

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/002,968

Applicant(s)

WIRNSBERGER ET AL.

Examiner

Quyen P. Leung

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-82 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-82 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

20020307, 20020722, 20020827, 20030402

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3-6, 9-10, 20-22, 28, 32-33, 43-54, 63-72, 75, 77-78, 81-82 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 3 recites the limitation "the optically responsive agents" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Only the singular form of agent was previously recited in claim 1.
4. Claim 4 recites the limitation "the covalent attachment" in line 1. There is insufficient antecedent basis for this limitation in the claim. Did applicant mean for claim 4 to depend on claim 3 instead of claim 1, as claim 3 first recites "covalently attaching..." in line 1?
5. Claim 4 recites the limitation "during or after... inorganic network formation" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Did applicant mean for claim 4 to depend on claim 2 instead of claim 1, as claim 2 first recites network in line 2?
6. Claim 9 recites the limitation "the inorganic network" in line 1. There is insufficient antecedent basis for this limitation in the claim. Did applicant mean for claim 9 to depend on claim 2 instead of claim 1, as claim 2 first recites the network in line 2?

7. Claim 10 recites the limitation "the inorganic network" in line 1. There is insufficient antecedent basis for this limitation in the claim. Did applicant mean for claim 9 to depend on claim 2 instead of claim 1, as claim 2 first recites the network in line 2?
8. Claim 20 recites the limitation "said inorganic network precursor" in line 1. There is insufficient antecedent basis for this limitation in the claim. Did applicant mean for the limitation to read "said inorganic network precursor species" instead?
9. Claim 21 recites the limitation "said inorganic network" in line 1. There is insufficient antecedent basis for this limitation in the claim.
10. Claim 22 recites the limitation "the inorganic network" in line 1. There is insufficient antecedent basis for this limitation in the claim.
11. Claim 28 recites the limitation "said optically responsive moiety" in line 1. There is insufficient antecedent basis for this limitation in the claim.
12. Claim 32 recites the limitation "said inorganic network precursor" in line 1. There is insufficient antecedent basis for this limitation in the claim. Did applicant mean for it to be "said inorganic network precursor **species**" instead?
13. Claim 33 recites the limitation "said inorganic network precursor" in line 1. There is insufficient antecedent basis for this limitation in the claim. Did applicant mean for it to be "said inorganic network precursor **species**" instead?
14. Claim 43 recites the limitation "inorganic network precursor" in each of the lines 3, 6 and 7. It is unclear whether or not they should be considered one in the same.
15. Claim 43 recites the limitation "optically responsive agent" in each of the lines 4, 5, and 6. It is unclear whether or not they should be considered one in the same.

16. Claim 43 recites the limitation "an inorganic network precursor" in lines 8-9. It is unclear whether it was a typo, as "an inorganic network precursor" previously appeared in line 7.

17. Claim 43 recites the limitation "said inorganic network precursor" in line 10. It is unclear to which precursor it refers, the one in line 3, in lines 6-7, or in lines 8-9.

18. Claim 44 recites the limitation "said inorganic network precursor" in line 1. It is unclear to which precursor it refers, the one in claim 43 line 3, lines 6-7, or lines 8-9.

19. Claim 45 recites the limitation "said inorganic network precursor" in line 1. It is unclear to which precursor it refers, the one in claim 43 line 3, lines 6-7, or lines 8-9.

20. Claim 53 recites the limitation "said optically responsive agent" in line 1. It is unclear to which agent it refers, the one in claim 43 line 4, lines 5, or line 6.

21. Claim 54 recites the limitation "said optically responsive agent" in line 1. It is unclear to which agent it refers, the one in claim 43 line 4, lines 5, or line 6.

22. Claim 63 recites the limitation "the device is a pH sensor" in line 1. It is unclear what further structural limitations are being implied by that limitation.

23. Claim 64 recites the limitation "the device exhibits a response time of less than about two seconds" in lines 1-2. It is unclear what further structural limitations are being implied by that claim.

24. Claim 66 recites the limitation "the device is a gas sensor" in line 1. It is unclear what further structural limitations are being implied by that claim.

25. Claim 67 recites the limitation "the device is an oxygen sensor" in line 1. It is unclear what further structural limitations are being implied by that claim. Further it is

Art Unit: 2828

unclear whether the device of claim 67 should be an oxygen sensor or a pH sensor, as recited in its parent claim 63.

26. Claim 68 recites "the optically responsive agent is $\text{Ru}(\text{bipy})_3^{3+}$ " in lines 1-2 while its parent claim 65 recites "the optically responsive agent is fluorescein" in lines 1-2. It is unclear in claim 68 which it should be.

27. Claim 69 recites the limitation "the optically responsive **mesostructured** material of claim 55" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. Did applicant intend for it to be "the optically responsive mesoscopically structured material" as in claim 55 line 1 instead? (It is noted that claim 70 also recites the limitation "the optically responsive **mesostructured** material" in lines 3-4. If applicant amends claim 69, claim 70 should be amended as well so that there would be sufficient antecedent basis for this limitation in the claim.)

28. Claim 71 recites the desired result of "spontaneously emitted light is amplified" in lines 1-2. It is unclear what further structural limitations are being implied by that desired result in a device claim.

29. Claim 72 recites the limitation "the optically responsive **mesostructured** material of claim 55" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim. Did applicant mean "the optically responsive mesoscopically structured material" as in claim 55 line 1 instead?

30. Claim 75 recites the limitation "the substrate plane" in line 2. There is insufficient antecedent basis for this limitation in the claim. Neither a substrate nor any of its planes

Art Unit: 2828

previously recited in its sole parent claim 73. Did applicant mean for it to depend on claim 74 instead?

31. Claim 77 recites the limitation "the substrate plane" in lines 2-3. It is unclear which plane, as a substrate has more than one plane.

32. Claim 78 recites the limitation "the optically responsive **mesostructured** material of claim 55" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim. Did applicant intend for it to be "the optically responsive **mesoscopically structured** material" as in claim 55 line 1 instead?

33. Claim 81 recites the desired result of "spontaneously emitted light is amplified" in lines 1-2. It is unclear what further structural limitations are being implied by that desired result in a device claim.

34. Claim 82 recites the limitation "said precursor species" in line 5 and in line 14. There is lack of antecedent basis for that limitation.

Claim Rejections - 35 USC § 102

35. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

36. Claims 1-82 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Sievers et al (WO 99/64504). Note reference will be made to the English-language equivalent of WO 99/64504-- US 2002/0032272 A1. Sievers et al discloses the claimed

Art Unit: 2828

invention. See claims 1-14, and paragraphs [0013]-[0017], [0021], [0033]-[0035], and [0056]-[0062].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quyen P. Leung whose telephone number is (571)272-1943. The examiner can normally be reached on 8:30-5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (571)272-1941. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1975.



Quyen P. Leung
Primary Examiner
Art Unit 2828

QPL